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PROTOZOA

COMPILED BY

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and R. H. CUMMINGS, Ph.D., B.Sc.

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2. PROTOZOA

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CECIL A. HOARE, D.Sc., F.R.S.

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- 1.—Anon. Article 25 (status of a holotype or lectotype in relation to an inadequate original description). [*Trypanosoma suis*]. Bull. zool. Nomencl. **4** 1950 pp. 292–293.
- 2.—Anon. *Diplodinium* Schuberg, 1888 (Class Ciliophora): trivial name of type species. Bull. zool. Nomencl. **4** 1950 pp. 379–381.
- 3.—Anon. The species commonly treated as having been named *Piroplasma annulatum* by Dschunkowsky and Luhs in 1904 (Class Sporozoa, order Coccidiida). Bull. zool. Nomencl. **4** 1950 pp. 431–433.
- 4.—Anon. *Schwagerina* von Möller 1877 (Class Rhizopoda, order Foraminifera): determination of type species. Bull. zool. Nomencl. **4** 1950 pp. 461–464.
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- 6.—Anon. Prof. Dr. Charles F. Craig—Prof. Dr. Martin Mayer. Bol. Inform. Parasit. Chilen. **6** 1951 p. 12.
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- 8.—Anon. Professor Dr. Emilio Brumpt. Bol. Inform. Parasit. Chilen. **6** 1951 p. 61.
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- 10.—Anon. *Trichomonas vaginalis* Brit. med. J. **ii** 1951 p. 189.
- 11.—Anon. How drugs act on trypanosomes. Brit. med. J. **ii** 1951 pp. 1138–1139.
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Pelusios sinuatus zuluensis (terrapin), blood (Portuguese E. Africa): *Trypanosoma sheppardi* sp. n., *T. neitzi* sp. n. (Mastigoph.), DIAS 270.

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Congiopodus leucopaecilus, blood (New Zealand coast): *Trypanosoma congiopodi* sp. n. (Mastigoph.), LAIRD 564.

Cottus rhotheus and *C. aleuticus*, blood (U.S.A.): *Cryptobia lynchi* sp. n. (Mastig.), KATZ 521.

Oncorhynchus kisutch, blood (U.S.A.): *Cryptobia salmositica* sp. n. (Mastig.), KATZ 521.

Parapercis colias, blood (New Zealand coast): *Trypanosoma parapercis* sp. n. (Mastigoph.), LAIRD 564.

Raja nasuta, blood (New Zealand coast): *Trypanosoma gargantua* sp. n. (Mastigoph.), LAIRD 564.

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Salarias fasciatus, blood (Fiji) : *Haemogregarina salariasi* sp. n. (Spor. Coccid.), LAIRD 566.

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Anacanthotermes ochraceus, gut (N. Africa) : *Kirbynia pulchra* sp. n. *Rhizonympha jahieri* sp. n. (Mastigoph.), GRASSÉ & HOLLANDE 401.

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†*Ammobaculites irregulariformis* sp. n. (p. 270); *A. eocretaceous* sp. n. (p. 271); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh.

senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*A. parvispira* **nom. n.** (p. 10) [for *Haplophragmium aequale* Chapman 1892 (non *H. aequale* Roemer 1841)] Albian, Low Countries, DAM Mem. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Ammodiscus parvus, variabilis, tenuissimus* **spp. n.** (p. 14); *A. gigas, turbulentus* **spp. n.** (p. 15); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow. ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Ammovertella elegantissima, lata* **spp. n.** (p. 23); *A. vaga, delicata* **spp. n.** (p. 24); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.; †*A. cellensis* **sp. n.** (p. 267) [nomen nudum. *A. cellensis* Brand 1949—now validated] Lower Cretaceous, Germany. BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Amphistegina schoeffleri* **sp. n.** (p. 59) Lower Tertiary, Venezuela, CIZANCOURT Mem. Soc. géol. Fr. Paléont. **64** 1951 pp. 1-68 figs.; †*A. angulata* (Cushman) **var. n. christmani** (p. 62) Tertiary, West Indies, DROOGER Proc. K. ned. Akad. Wet. Amsterdam **54B** (1) 1951 pp. 54-65 figs.

†*Anomalina bighornensis* **sp. n.** (p. 66) Upper Cretaceous, Southern Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35-68 figs.; †*A. berthelini* **nom. n.** (p. 56) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Archaediscus probatus, karreriformis* **spp. n.** (p. 83); *A. subbashkiricus* **var. n. grandis** (p. 84); *A. timanicus* **var. n. minima** (p. 85); *A. permodiscoides* **sp. n.** (p. 85); *A. variabilis* **sp. n.** (p. 86); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Arenonionella* **gen. n.** (p. 377) *routei* **sp. n.** (p. 378) (genotype), Miocene, Algeria, MARKS Proc. K. ned. Akad. Wet. **54B** (4) 1951 pp. 375-378 figs.

Arenoparrella **gen. n.** (p. 31) (genotype *Trochammia inflata* (Montague) **var. mexicana** Kornfeld 1931)

Gulf Coast, U.S.A., ANDERSEN J. Paleont. **25** (1) 1951 pp. 31-34 figs.;

†*A.* (Addenda to original description, Andersen 1951), ANDERSEN **34**.

†*Articulina sulcata* Reues **var. n. nuda** (p. 37) Miocene, Vienna Basin, MARKS Contr. Cushman Fdn. **2** (2) 1951 pp. 33-73 figs.

†*Assilina reicheli* **sp. n.** (p. 215), Lower Tertiary, Switzerland, SCHAUB Schweiz. paläont. Abh. **68** 1951 pp. 1-222 figs.

†*Asterigina tatumii* **sp. n.** (p. 19) Middle Eocene (Claiborne), Alabama, U.S.A., HUSSEY Contr. Cushman Fdn. **2** (1) 1951 pp. 19-20 figs.

Asterorotalia **gen. n.** (p. 502) (genotype *A. pulchella* (d'Orbigny)), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Bermudezella* **gen. n.** (p. 224) (genotype *Carpenterella truncata* Bermudez 1949) [**nom. n.** for *Carpenterella* Bermudez 1949 non Collette 1933], Middle Oligocene, Haiti, THALMANN Ecl. geol. helv. **43** 1950 [1951] p. 224.

†*Bermudezina extans* **sp. n.** (p. 492), Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.

†*Bigenerina antiquissima* **sp. n.** (p. 275) Lower Cretaceous, Germany. BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

Bisaccium **gen. n.** (p. 32) *imbriatum* (genotype) **sp. n.** Gulf Coast, ANDERSEN J. Paleont. **25** (1) 1951 pp. 31-34 figs.

Bolivina ramosa **sp. n.** (p. 52), South Sumatra, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.; †*B. crassiseptata* **sp. n.** (p. 59); *B. trajectina, viennensis* **spp. n.** (p. 60) Miocene, Vienna Basin, MARKS Contr. Cushman Fdn. **2** (2) 1951 pp. 33-73 figs.; †*B. asanoi* **sp. n.** (p. 373), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.

†*Bontourina soturniformis* **sp. n.** (p. 55) Lower Tertiary, Venezuela, CIZANCOURT Mem. Soc. géol. Fr. Paléont. **64** 1951 pp. 1-68 figs.

†*Bradyina concinna* sp. n. (p. 39); *B. conautiliformis*, *pseudonautiliformis* spp. n. (p. 41); *B. samarica* sp. n. (p. 42); *B. s. var. n. grandis* (p. 43); *B. lepida* sp. n. (p. 43); *B. venusta*, *minima* spp. n. (p. 44); *B. pauciseptata* sp. n. (p. 45); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Brunsiella* gen. n. (p. 16) [genotype *Brunsiella ammodiscoidea* (Rausser) 1938]; *Brunsiella densa* sp. n. (p. 18); *B. densa* var. n. *parva* (p. 18); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Bulimina bulletella* sp. n. (p. 64) Upper Cretaceous, Southern Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35-68 figs.; †*B. affectata* sp. n. (p. 154) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129-164 figs.

†*Buliminella loeblichii* sp. n. (p. 324) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*B. peruviana* var. n. *obesa* (p. 151) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129-164 figs.

†*Cassidella* gen. n. (p. 264) [on p. 264 *Virgulina* (Bolivina) *tegulata* (Reuss) designated as genotype; on p. 265 genotype designated as *C. oligocenica* Hofker.]; *Cassidella oligocenica* sp. n. (p. 265) [for *Virgulina schriebersiana* Czjzek (*partim*) and *V. squamosa* Egger (non d'Orbigny)] Oligocene, Netherlands, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.; *C. pacifica* sp. n. (p. 273) East Indies, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Cassidulina cruysi* sp. n. (p. 68) Miocene, Vienna Basin, MARKS Contr. Cushman Fdn. **2** (2) 1951 pp. 33-73 figs.; †*C. teretis* sp. n. (p. 7) Pleistocene, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1-8 figs.

†*Choffatella stenzeli* sp. n. (p. 590) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.

Cibicides hyalina sp. n. (p. 359) South Sumatra; *C. aequipunctata* sp. n. (p. 362) South Sumatra, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.; †*C. roestae* sp. n. (p. 291) Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197-359 figs.; †*C. kennedyi* sp. n. (p. 66) Upper Cretaceous, Southern Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35-68 figs.; †*C. praeventratumides* sp. n. (nom. nud.) p. 450 Palaeogene, Poland, MASLAKOVA & MURATOR C.R. Acad. Sci URSS N.S. **81** (3) 1951 pp. 449-452.

†*Cibicidoides cederstromi* sp. n. (p. 28) Paleocene, New Jersey, McLEAN Contr. Cushman Fdn. **2** (1) 1951 pp. 20-29 figs.

†*Citharina seitzii* sp. n. (p. 296); *C. pseudostriatula* sp. n. (p. 298); *C. rudocostata* sp. n. (p. 299); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*C. glaberrima* sp. n. (p. 26) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Citharinella laevis* sp. n. (p. 38) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paleont. **63** 1950 pp. 1-66 figs.

†*Climacammina elegantula*, *aljutovica* spp. n. (p. 60); *C. procera*, *tenuicribata* spp. n. (p. 61); *C. fragilis*, *obscura* spp. n. (p. 62); *C. keltmensis*, *ivanovae* spp. n. (p. 63); *C. obsoleta*, *moelleri* spp. n. (p. 64); *C. m. var. n. timanica* (p. 65); *C. grandis* sp. n. (p. 66); *C. apliatula* sp. n. (p. 67); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Colomia californica* sp. n. (p. 512); *C. californica* var. n. *mundula* (p. 512); Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.

Conorbella gen. n. (p. 466) (genotype *Conorbella pulvinata* (Brady)), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Conorbis* gen. n. (p. 418) *mitra* sp. n. (p. 418) (genotype) Lower Cretaceous, Holland, HOFKER Siboga Exped. Monogr. **4a** 1951 pp.

1-513 figs.; †*C. hofkeri* sp. n. (p. 325); *C. valendisensis* sp. n. (p. 326); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Cornuspira primitiva* sp. n. (p. 279) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Coscinophragma* gen. n. (p. 221) (genotype *Lichenopora cribrosa* Reuss 1845-6) [nom. n. for *Polyphragma* Reuss 1871] Cretaceous, THALMANN Ecl. geol. helv. **43** 1950 [1951] p. 221.

†*Coscinophraginae* subfam. n. (p. 221) [nom. n. for *Polyphragminae* Cushman 1948] Upper Palaeozoic to Recent, THALMANN Ecl. geol. helv. **43** 1950 [1951] p. 221.

†*Criboelphidium arcticum* sp. n. (p. 6) Pleistocene, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1-8 figs.

†*Cribrostomoides frizzeli* sp. n. (p. 588) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.

†*Cribrostomum postezimium* sp. n. (p. 56); *C. brevis* sp. n. (p. 57); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Cuneolina trinitensis* sp. n. (p. 592) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.

†*Cyclammia polygonata* sp. n. (p. 32) Cretaceous, Austria, NOTH Jahrb. geol. Bundes Anst. Wien Sonderband **3** 1951 pp. 1-91 figs.

†*Deckerella tenuissima, gracilis* spp. n. (p. 68); *D. composita, mjachkovensis* spp. n. (p. 69); *D. dvinensis* sp. n. (p. 70); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Deckerellina* gen. n. (p. 57) *istiensis* sp. n. (p. 58) (genotype); *D. mirabilis* sp. n. (p. 57); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

Dendritina striato-punctata sp. n. (p. 233); *D. striata* sp. n. (p. 234) East Indian Archipelago. HOFKER J. R. Micr. Soc. London III **71** (2) 1951 pp. 223-239 figs.

†*Dentalina porcatulata* sp. n. (p. 88) Cretaceous, United States, LOEBLICH & TAPPAN Fondren Sci. Ser. **4** 1951 pp. 65-92 figs.; †*D. annulomissae* sp. n. (p. 25) Paleocene, New Jersey, McLEAN Contr. Cushman Fdn. **2** (1) 1951 pp. 20-29 figs.; †*D. filistoma* sp. n. (p. 29) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Discamminoides* gen. n. (p. 103) *tolteri* sp. n. (p. 103) (genotype) Miocene, Trinidad, B.W.I., BRÖNNMANN Contr. Cushman Fdn. **2** (3) 1951 pp. 97-105 figs.

Discobolovina nitida sp. n. (p. 428) South Sumatra, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Discocyclina* (*Discocyclina*) *vau-trini* sp. n. (p. 52); *D. (D.) evermondi* sp. n. (p. 53); Lower Tertiary, Venezuela, CIZANCOURT Mem. Soc. géol. Fr. Paléont. **64** 1951 pp. 1-68 figs.

Discopulvinulina gen. n. (p. 448) (genotype *D. bertheloti* (d'Orbigny)); *D. pacifica* sp. n. (p. 452) East Indies; *D. pseudobatulata* sp. n. (p. 462) Java Sea; *D. hyalina* sp. n. (p. 466) South Sumatra and New Zealand; *D. macropora* sp. n. (p. 460) Bay of Naples, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

Discorbis parri sp. n. (p. 222) [nom. n. for *Discorbis umbonifer* Parr 1950 non *Discorbis umbonifera* Schwager 1883] Recent, Tasmania, THALMANN Ecl. géol. helv. **43** 1950 [1951] pp. 222-223; †*D. stictata* sp. n. (p. 4) Lower Cretaceous, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1-8 figs.; †*D. magna* sp. n. (p. 23), Eocene, Italy, VIALLI Riv. ital. Paleont. **57** (1) 1951 p. 23 fig.

†*Dorothia soapcreekensis* sp. n. (p. 49) Upper Cretaceous, Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35-68 figs.

†*Eggerellina mariae* sp. n. (p. 15) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Elphidiella momiyamensis* sp. n. (p. 372), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.

Elphidium littorale sp. n. (p. 251) brackish water, France, LE CALVEZ, J. & Y. Vie et Milieu **2** (2) 1951 pp. 237-254 figs.; †*E. flexuosum* (d'Orbigny) var. n. *reussi* (p. 52) Miocene, Vienna Basin, MARKS Contr. Cushman Fdn. **2** (2) 1951 pp. 33-73 figs.; †*E. microgranulosum* sp. n. (p. 222) [nom. n. for *Elphidium granulosum* Galloway & Wissler 1927 non *Elphidium macellum* var. *granulosum* Sidebottom 1909], Pleistocene, California, THALMANN Ecl. geol. helv. **43** 1950 [1951] pp. 222-223; †*E. sagrai* subsp. n. *percrassum* (p. 222) [nom. n. for *Elphidium sagrai* var. *crassum* Galloway & Heminway 1941 non *Elphidium crispum* var. *crassa* Möbius 1880], Middle Oligocene, Puerto Rico, THALMANN Ecl. geol. helv. **43** 1950 [1951] pp. 222-223; †*E. ozawai* sp. n. (p. 372), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.

†*Endothyra inusitata* sp. n. (p. 31); *E. bradyi* var. n. *simplex* (p. 31); *E. bradyi* var. n. *irregularis* (p. 32); *E. minuta* sp. n. (p. 32); *E. mosquensis*, *rzhevica* spp. n. (p. 33); *E. aljutovica*, *siviniensis* spp. n. (p. 34); *E. irinae*, *eostaffelloides* spp. n. (p. 35); *E. e. var. n. lata* (p. 36); *E. spirilliniformis* var. n. *evoluta* (p. 36); *E. mordovica* sp. n. (p. 38); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Eoeponidella strombodes* sp. n. (p. 6) Upper Cretaceous, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1-8 figs.

†*Eouwigerina* Cushman 1926 (re-definition places *Zeauwigerina* Finlay 1939 in synonymy), LOEBLICH **605**.

†*Epistomina caracolla* subsp. n. *anterior* (p. 326); *Epistomina tenuicostata*, *praeornata* spp. n. (p. 327); Lower Cretaceous, Germany, BAR-

TENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Eponides tanaii* sp. n. (p. 376) Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.; †*E. cocoensis* Cushman 1928, validity thereof, McLEAN **634**.

Euvigerina gen. n. (p. 217) (genotype not designated), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Flabellamina astdthageni* sp. n. (p. 269) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Flintina droogeri* sp. n. (p. 41) Miocene, Vienna Basin, MARKS Contr. Cushman Fdn. **2** (2) 1951 pp. 33-73 figs.

†*Flourensina intermedia* sp. n. (p. 15) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Fronidicularia microdisca* subsp. n. *dichotomiana* (p. 304); *F. hastata* subsp. n. *paucicostulata* (p. 305); *F. rehburgensis* sp. n. (p. 305); *F. pseudoconcinna* sp. n. (p. 306); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; *F. mediotriata* sp. n. (p. 32), *F. simplissima* nom. n. (p. 33) [for *Fronidicularia archiaciana* Burrows, Sherborn et Bailey, 1890, et Chapman 1894 (non d'Orbigny)] Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.; †*F. richardsi* sp. n. (p. 26) Paleocene, North Carolina, McLEAN Contr. Cushman Fdn. **2** (1) 1951 pp. 20-29 figs.; †*F. lustrata* sp. n. (p. 2) Jurassic, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1-8 figs.; †*F. imbricata*, *frontierensis* spp. n. (p. 61) Upper Cretaceous, Southern Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35-68 figs.

†*Fusarchaias* gen. n. (p. 459) *bermudezi* sp. n. (p. 460) (genotype) Oligo-Miocene, Cuba, REICHEL Ecl. geol. helv. **44** 1951 pp. 458-464 figs.

†New genera of Fusulinid Foraminifera, THOMPSON **1009**.

†*Gaudryina manushukensis* sp. n. (p. 2) Lower Cretaceous, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1-8 figs.; †*G. glabrata* subsp. n. *papillata* (p. 222) [nom. n. for *Gaudryina glabrata* var. *maxima* Galloway & Heminway 1941 non *Gaudryina baccata* var. *maxima* Egger 1893], Middle Oligocene, Puerto Rico, THALMANN Ecl. geol. helv. **43** 1950 [1951] pp. 222-223; †*G. arguta* sp. n. (p. 492) Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.; †*G. vetustissima* sp. n. (p. 276) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Gaudryinella hannoverana* sp. n. (p. 276) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*G. tsuchidai* sp. n. (p. 369), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.

†*Gavelina gyroidiniformis* sp. n. (p. 24) Albian, Holland, HOFKER Publ. natuurh. Genoot. Limburg **4** 1951 pp. 1-40 figs.

Gavelinopsis gen. n. (p. 485) (genotype *Discorbis praegeri* Heron-Allen & Earland), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Globigerinita* gen. n. (p. 18) *naparimaensis* sp. n. (p. 18) (genotype) Miocene, Trinidad, B.W.I., BRÖNNIMANN Contr. Cushman Fdn. **2** (1) 1951 pp. 16-18 figs.

†*Globivalvulina minima* sp. n. (p. 76); *G. kamensis, pulchra* spp. n. (p. 78); *G. mosquensis, syzranica* spp. n. (p. 79); *G. granulosa* sp. n. (p. 80); *G. g. var. n. complicata* (p. 80); *G. g. varr. n. compressa, multiseptata* (p. 81); *G. rauserae* sp. n. (p. 81); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Globorotalia lacerti* Cushman and Renz 1946 [correction of lettering of type figure], RENZ **835**.

†*Globotruncana* Cushman: species and distribution, BOLLI **109**; †*G. gansseri* sp. n. (p. 196); *G. citae, intermedia* spp. n. (p. 197); *G. mayaroensis* sp. n. (p. 198) Cretaceous, Trinidad, BOLLI J. Paleont. **25** (2) 1951 pp. 187-199 figs.

†*Glomospira pusilliformis* sp. n. (p. 20); *G. mikhailovi* sp. n. (p. 21); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Glomospirella* gen. n. *borealis* sp. n. (p. 27) (genotype); *G. biformis* sp. n. (p. 27); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs. [Note: Generic name preoccupied by *Glomospirella* Plummer Univ. Texas Publ. 4401, 1945, p. 233, Order Foraminifera, Upper Carboniferous].

†*Glomospiroides* gen. n. *fursenki* sp. n. (p. 28) (genotype); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Guppyella* gen. n. (p. 98) *miocenica* sp. n. (p. 99) (genotype) Miocene, Trinidad, B.W.I., BRÖNNIMANN Contr. Cushman Fdn. **2** (3) 1951 pp. 97-105 figs.

†*Gyroidina globosa* var. n. *orbicella* (p. 505) Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.

†Notes on the Hantkeninids, BRÖNNIMANN **139**.

†*Haplophragmina* gen. n. (p. 28) *kashirica* sp. n. (p. 29) (genotype); *H. potensa* sp. n. (p. 29); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Haplophragmium inconstans* sp. n. (p. 272); *Haplophragmium inconstans inconstans* subsp. n. (p. 272); *H. inconstans erectum*; *H. i. gracile* subsp. n. (p. 272); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Haplophragmoides* ? *barrowensis* sp. n. (p. 1) Jurassic, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1-8 figs.; †*H. obliquicameratus* sp. n. (p. 35) Miocene, Vienna Basin, MARKS Contr. Cushman Fdn. **2** (2) 1951 pp. 33-73 figs.

†*Hemigordius simplex* sp. n. (p. 86) Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Heminwayina* gen. n. (p. 325) [genotype *Discorbis multisectus* Galloway & Hemingway 1941]; Lower Tertiary, Gulf Coast and Puerto Rico; *H. gallowayi* sp. n. (p. 329), Middle Oligocene, Puerto Rico, BERMUDEZ Mem. Soc. Cienc. nat. La Salle **11** (30) 1951 pp. 325-329 figs.

†*Heterohelix navarroensis* sp. n. (p. 107) Upper Cretaceous, Texas, U.S.A., LOEBLICH Contr. Cushman Fdn. **2** (3) 1951 pp. 106-110 figs.

Hyalinea gen. n. (p. 508) (genotype *Anomalina baltica* Schroeter), HOFKER Siboga Exped. Mongr. **4a** 1951 pp. 1-513 figs.

†*Hyperammia aljutovica* sp. n. p. 13, Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.; †*H. gaultina* sp. n. (p. 5) Albian, Low Countries, DAM Mem. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66, figs.

†*Labyrinthina* gen. n. (p. 793) *mirabilis* sp. n. (p. 793) (genotype) Upper Triassic, Tyrol, WEYNSCHENCK J. Paleont. **25** (6) 1951 pp. 793-795 figs.

†*Lagena acuticosta* var. n. *brevipostica* (p. 502); *Lagena acuticosta* var. n. *proboscidiialis* (p. 503) Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.; †*L. apiculata* subsp. n. *neocomiana* (p. 317); *Lagena hauteriviana* sp. n. (p. 317); *L. hauteriviana* subsp. n. *hauteriviana* (p. 317); *L. h. subsp. n. cylindracea* (p. 318); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Lagenonodosaria tubulata* var. n. *japonica* (p. 371), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.

†*Lamarckina bienfaiti* sp. n. (p. 263) Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197-359 figs.

†*Lenticulina d'orbignyi* subsp. n. *multireticulosa* (p. 282) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*L. morishimai* sp. n. (p. 10) Miocene, Japan, INOUE & NAKASEKO J. Geol. Soc. Japan **57** (664) 1951 pp. 7-11 figs.; †*L. subarenacea* sp. n. (p. 594) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.; †*L. (Lenticulina) eichenbergi* sp. n. (p. 285); *L. (Lenticulina) guttata* subsp. n. *striata* (p. 285); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*L. (Lenticulina) saxonica* sp. n. (p. 284); *L. (Lenticulina) saxonica saxonica* subsp. n. (p. 284); *L. (L.) saxonica bifurcilla* subsp. n. (p. 284); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*L. (Marginulinopsis) hemicylindrica* sp. n. (p. 45) Cretaceous, Austria, NOTH Jahrb. geol. Bundes Anst. Wien Sonderband **3** 1951 pp. 1-91 figs.; †*L. (Vaginulinopsis) humilis* subsp. n. *praecursoria* (p. 287) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*L. (Vaginulinopsis) korneubergensis* sp. n. (p. 46); *L. (Vaginulinopsis) angulata* sp. n. (p. 47); *L. (Vaginulinopsis) angulata* var. n. *decemcostata* (p. 47); Cretaceous, Austria, NOTH Jahrb. geol. Bundes Anst. Wien Sonderband **3** 1951 pp. 1-91 figs.; †*L. (Saracenaria) praemendonensis* sp. n. (p. 47) Cretaceous, Austria, NOTH Jahrb. geol. Bundes Anst. Wien Sonderband **3** 1951 pp. 1-91 figs.; †*L. (Saracenaria) valanginiana* sp. n. (p. 291), Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Leptodermella maestrichtiensis* sp. n. (p. 211), Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197–359 figs.

†*Lingulina alaskensis* sp. n. (p. 1) Trias, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1–8 figs.; †*L. biformis* sp. n. (p. 300), Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239–336 figs.

Listerella minuta sp. n. (p. 27) South Sumatra, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1–513 figs.

†*Lituotuba regularis* sp. n. (p. 22), Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1–126 figs.; †*L. nufsbachensis* sp. n. (p. 28), Cretaceous, Austria, NOTH Jahrb. geol. Bundes Anst. Wien Sonderband. **3** 1951 pp. 1–91 figs.

Loxostoma incertum sp. n. (p. 55) East Java Sea; *L. cuneatum* sp. n. (p. 87) South Sumatra, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1–513 figs.

†*Marginulina utsunomiyensis* sp. n. (p. 370), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369–377 figs.; †*M. similis* var. n. *obliquinodus* (p. 498) Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488–513 figs.

†*Marginulinopsis frontierensis*, *ammonitiformis* spp. n. (p. 52); *M. amplaspira* sp. n. (p. 54) Upper Cretaceous, Southern Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35–68 figs.; †*M. umiatensis* sp. n. (p. 2) Lower Cretaceous, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1–8 figs.

†*Miliammina valdensis* sp. n. (p. 277) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239–336 figs.

†*Miogypsina* (*Miogypsinella*) *bermudezi* sp. n. (p. 357) Lower Middle Oligocene, Cuba, DROOGER Proc. K. ned. Akad. Wet. Amsterdam **54B** (4) 1951 pp. 356–365 figs.

†Notes on primitive *Miogypsinidae*, DROOGER **283**.

Marenda gen. n. (p. 91) *nematoides* sp. n. (p. 92) (genotype) Catalan coast of Mediterranean, NYHOLM Contr. Cushman Fdn. **2** (3) 1951 pp. 91–95 figs.

†*Neoalveolina vonderschmitti* sp. n. (p. 468) Eocene, Northern Italy, SCHWEIGHAUSER Ecl. geol. helv. **44** 1951 pp. 465–469 figs.

Neoconorbina gen. n. (p. 433) *pacifica* sp. n. (p. 438) (genotype), Sunda Strait; *N. neapolitana* sp. n. (p. 438) Bay of Naples; *N. marginata* sp. n. (p. 435) South Sumatra, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1–513 figs.

Neouvigerina gen. n. (p. 206) (genotype not designated), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1–513 figs.

†*Nodophthalmidium butellum* sp. n. (p. 279) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239–336 figs.

†*Nodosarella bulbosa* sp. n. (p. 45) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1–66 figs.

†*Nodosaria shublikensis* sp. n. (p. 1) Trias, Alaska, TAPPAN Contr. Cushman Fdn. **2** (1) 1951 pp. 1–8 figs.; †*N. bighornensis* sp. n. (p. 58); *N. xavierensis* sp. n. (p. 59) Upper Cretaceous, Southern Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35–68 figs.; †*N. sceptrum* subsp. n. *spiniocostata* (p. 313) Lower Cretaceous Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239–336 figs.

†*Nonion troostae* sp. n. (p. 250) Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197–359 figs.; †*N. boueanum* var. n. *multilobum* (p. 371), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369–377 figs.; †*N. ecuadoranum* sp. n. (p. 149) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129–164 figs.

†*Nubecularia triloculina* nom. n. (p. 19) [for *Nubecularia lucifuga* Jones Parker et Brady 1860 (non DeFrance)] Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1–66 figs.

†*Nummulites buxtorfi* (p. 190), *praelaevigatus* (p. 188), *leupoldi* (p. 159) **spp. n.**; *N. planulatus* **subsp. n.** *planissimus* (p. 181), *thaliciformis* (p. 179), *cussacensis* (p. 178); *N. nitidus* **subsp. n.** *laxus* (p. 163), *inflatus* (p. 164); *N. exilis* **subsp. n.** *involutus*, *robustus* (p. 168); *N. silvanus* **sp. n.** (p. 153); *N. s.* **subsp. n.** *gallicus* (p. 154); *N. vonderschmitti* **sp. n.** (p. 171); *N. v.* **subsp. n.** *tenuus* (p. 174); *N. pernotus* **sp. n.** (p. 108); *N. p.* **subsp. n.** *angustus* (p. 113), *paraburdigalensis* (p. 111); *N. partschi* **subsp. n.** *aequalispira* (p. 152); *N. praecursor* **subsp. n.** *alpinus* (p. 138), *ornatus* (p. 139); *N. subplanulatus* **subsp. n.** *soerenbergensis* (p. 101); *N. globulus* **subsp. n.** *increscens* (p. 107); *N. burdigalensis* **subsp. n.** *pergranulatus* (p. 122); *N. rotularius* **subsp. n.** *praevius* (p. 125); *N. subramondi* **subsp. n.** *maior* (p. 130); Lower Tertiary, Switzerland, SCHAUB Schweiz. paläont. Abh. **68** 1951 pp. 1-222 figs.; †*N. planulatus* **subsp. n.** *bearnensis* (p. 237) Eocene, Pyrenees, SCHAUB & SCHWEIGHAUSER Ecl. geol. helv. **43** 1950 [1951] pp. 236-242 figs.; †*N. inkermanensis* **nom. n.** (p. 124) [for *Nummulina taurica* de la Harpe Forma B in Rozszenik 1929 non *Nummulina taurica* de la Harpe Forma A in Rozszenik 1929] Lower Tertiary, Switzerland, SCHAUB Schweiz. paläont. Abh. **68** 1951 pp. 1-222 figs.; †*N. delaharpei* **nom. n.** [for *Nummulites gizehensis* var. *viquesneli* de la Harpe, 1883] Eocene, Middle East, SAID **881**; †*N. (Nummulites) sanctiojanni*, *henrici* **spp. n.** (p. 48) Lower Tertiary, Venezuela, CIZAN-COURT Mem. Soc. géol. Fr. Paléont. **64** 1951 pp. 1-68 figs.; †*N. gizehensis*, restudy of the "races", SAID **881**; †*Nummulites*, Palaeocene and Eocene, SCHAUB **890**.

†*Okeetaella* **gen. n.** (p. 116) *fryei* **sp. n.** (p. 116) (genotype) Carboniferous, U.S.A., THOMPSON Contr. Cushman Fnd. **2** (4) 1951 pp. 115-119 figs.

†*Operculina labanae* **sp. n.** (p. 253), Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197-359 figs.

†*Orbitoides brinkae* **sp. n.** (p. 296) Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197-359 figs.

†Structure of Cretaceous orbitoids, ABRARD **17**.

†*Orbulina suturalis* **sp. n.** (p. 135) Miocene, Trinidad, B.W.I., BRÖNNI-MANN Contr. Cushman Fdn. **2** (4) 1951 pp. 131-138 figs.

†*Palaeonubecularia* **gen. n.** *fluxa* **sp. n.** (p. 91) (genotype); *P. uniserialis* **sp. n.** (p. 91); *P. rustica* **sp. n.** (p. 92); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Palaeotextularia fragilis* **sp. n.** (p. 49) (nomen nudum) Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

Palmula Lea, 1833, has priority over *Palmula* Prévot, 1938 (bacteria), BECKER **79**.

†*Paramillerella* **gen. n.** (p. 115) genotype *Millerella* ? *advena* Thompson 1944; Carboniferous, U.S.A., THOMPSON Contr. Cushman Fnd. **2** (4) 1951 pp. 115-119 figs.

Parrellina **gen. n.** (p. 224) (genotype *Polystomella imperatrix* Brady 1884) [**nom. n.** for *Elphidioides* Parr 1950 non Cushman 1945] Recent, Antarctic, THALMANN Ecl. geol. helv. **43** 1950 [1951] pp. 224-5.

†*Pealerina* **gen. n.** (p. 237) (genotype *Ellisina spatula* Lalicker 1950) [**nom. n.** for *Ellisina* Lalicker 1950 (preoc. Norman 1903 p. 596)] LALICKER J. Paleont. **25** (2) 1951 p. 237.

Pelosphaera Heron-Allen & Earland, 1932, is preceded by *Pelosphaera* Lauterborn, 1906 (bacteria), BECKER **79**.

Recent Peneroplidae, HOFKER **464**.

†*Placopsilina neocomiana* **sp. n.** (p. 280) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Planularia mariae* sp. n. (p. 24) Albian, Low Countries, DAM Mem. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.; †*P. crosswicksana* sp. n. (p. 24) Paleocene, New Jersey, McLEAN Contr. Cushman Fdn. **2** (1) 1951 pp. 20-29 figs.

†*Planulina mascula, multipunctata* spp. n. (p. 506) Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.

†*Plectina nuttalli* sp. n. (p. 144) [for *Plectina dalmatina* Nuttall 1935 (non Liebus)] Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129-164 figs.

†*Plectofrondicularia billmani* sp. n. (p. 438) Tertiary, Washington, RAU J. Paleont. **25** (4) 1951 pp. 417-453 figs.; †*P. niinoi* sp. n. (p. 373). Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.

†*Pleurostomella ecuadorana* sp. n. (p. 156) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129-164 figs.

Praeglobobulimina gen. n. (p. 248) (genotype *Bulimina pyrula* var. *spiniscens* Brady), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Praeuwigerina* gen. n. (p. 188) (genotype *Praeuwigerina westphalica* (Franke) Upper Cretaceous, Maastricht), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

Proglobobulimina gen. n. (p. 252) (genotype *P. pupoides* (d. Orbigny)), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Psammospaera eocenica* p. ns. (p. 142) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129-164 figs.

†*Pseudobradyna* gen. n. *pulchra* sp. n. (p. 45) (genotype) Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Pseudofusulinella* gen. n. (p. 117) genotype *Neofusulinella occidentalis* Thompson & Wheeler, 1946, THOMPSON Contr. Cushman Fdn. **2** (4) 1951 pp. 115-119 figs.

†*Pseudoglandulina mutabilis* subsp. n. *striata* (p. 316) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*P. nallpeensis* sp. n. (p. 435) Tertiary, Washington, RAU J. Paleont. **25** (4) 1951 pp. 417-453 figs.

†*Pseudonubeculina lepida* sp. n. (p. 278) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Pseudoparrella limburgensis, meetrenae, minisae* spp. n. (p. 278) Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197-359 figs.

†*Pseudophragmina (Proporocyclina) renzi* sp. n. (p. 53) Lower Tertiary, Venezuela, CIZANCOURT Mem. Soc. géol. Fr. Paléont. **64** 1951 pp. 1-68 figs.

†*Pullenoides* gen. n. (p. 10) *senoniensis* sp. n. (p. 10) (genotype) [for *Sphaeroidina bulloides* Van Raadschoven 1940 (non d'Orbigny)] Upper Cretaceous, Maastricht, HOFKER Publ. natuurh. Genoot. Limburg **4** 1951 pp. 1-40 figs.

†*Pyrgo pseudoinornata* sp. n. (p. 145) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129-164 figs.

†*Quinqueloculina orbiculata* sp. n. (p. 145) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. **25** (2) 1951 pp. 129-164 figs.; †*Q. triangulata* sp. n. (p. 593) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.

†*Ramulina protea* sp. n. (p. 596) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.; †*R. tappanae* sp. n. (p. 322); *R. aptiensis* sp. n. (p. 323); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Reophax minutissima* sp. n. (p. 266) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*R. inordinatus* sp. n. (p. 48) Upper Cretaceous, Montana, YOUNG J. Paleont. **25** (1) 1951 pp. 35-68 figs.

†*Reussella comalensis* sp. n. (p. 597) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.; *R. weberi* sp. n. (p. 170) South Sumatra, HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Rhizammina grilli* sp. n. (p. 21) Cretaceous, Austria, NOTH Jahrb. geol. Bundes Anst. Wien Sonderband **3** 1951 pp. 1-91 figs.

†*Robulus modestus* sp. n. (p. 493) Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.; †*R. jerseyanus* sp. n. (p. 23) Paleocene, New Jersey, MCLEAN Contr. Cushman Fdn. **2** (1) 1951 pp. 20-29 figs.; †*R. clericii* (Fornasini) var. n. *carinata* (p. 42) Miocene, Vienna Basin, MARKS Contr. Cushman Fdn. **2** (2) 1951 pp. 33-73 figs.; †*R. becki*, *holcombensis* spp. n. (p. 431) Tertiary, Washington, RAU J. Paleont. **25** (4) 1951 pp. 417-453 figs.

†*Rotalia ikebei* sp. n. (p. 11), Miocene, Japan, INOUE & NAKASEKO J. Geol. Soc. Japan **57** (664) 1951 pp. 7-11 figs.; †*R. tochiensis* sp. n. (p. 374), *asanoi* nom. n. (p. 375) [for *Rotalia beccarii* Asano (non Linnaeus)], Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.

†*Saracenaria subglobosa* sp. n. (p. 493) Upper Cretaceous, California, BANDY J. Paleont. **25** (4) 1951 pp. 488-513 figs.

Schwagerina von Möller, 1877, with type species *S. borealis* (Ehrenberg, 1842), *S. moelleri* Rauser-Chernoussova 1937 : to be placed on official lists of gen. and spp. in zoology, ANON. **4**.

†*Sigmomorphina pseudoschencki* sp. n. (p. 436) Tertiary, Washington, RAU J. Paleont. **25** (4) 1951 pp. 417-453 figs.; †*S. kronenburgae* sp. n. (p. 246), Maestrichtian, Netherlands, VISSER Leidse Geol. Mededel. **16** 1951 pp. 197-359 figs.

†*Spiroplectammina conspecta* sp. n. (p. 70); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.; †*S. rectangularis* var. n. *cretosa* (p. 11), Albian, Low Countries, DAM Mem. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Spiroloculina duestensis* sp. n. (p. 277) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Spirophthalmidium gaultinum* nom. n. (p. 18) [for *Spiroloculina nitida* Chapman 1898 (non *S. nitida* d'Orbigny)], Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.

†*Stensiöina*, systematic position, VAŠIČEK **1046**; †*S. brotzeni* sp. n. (p. 85) Upper Eocene, Moravia; *St. olgae* sp. n. (p. 88) Upper Cretaceous, Moravia, VAŠIČEK Sborn. geol. Úst. čsl. (Paleont.) **18** 1951 pp. 85-96 figs.

Streblus batavus sp. n. (p. 501) North Sea; *S. turgidus* sp. n. (p. 502) East Indies and Philippine Islands; HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Syzrania* gen. n. *bella* sp. n. (p. 92) (genotype); *S. confusa* sp. n. (p. 93); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Tetraplasia quadrata* sp. n. (p. 275) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Tetrataxis minima* var. n. *lati-spiralis* (p. 71); *T. m.* var. n. *mosquensis* (p. 72); *T. planispiralis* sp. n. (p. 73); *T. angusta* var. n. *serpukhovensis* (p. 74); *T. numerabilis* sp. n. (p. 74); *T. paraconica* sp. n. (p. 75); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Textularia losangica* sp. n. (p. 82) Cretaceous, United States, LOEBLICH & TAPPAN Fondren Sci. Ser. **4** 1951 pp. 65-92 figs.; †*T. eofragilis* sp. n. (p. 49); *T. primitiva* sp. n. (p. 50); *T. angusta* sp. n. (p. 50); *T. a.* var. n. *elongata* (p. 50); *T. a.* var. n. *maxima*, *decurta* (p. 51); *T. minutissima*, *fragilis*, *vulgaris* spp. n. (p. 52); *T. longissima*, *gibbosaeformis* spp. n. (p. 54); *T. ponderosa* sp. n. (p. 54); *T. bruta*, *paracommunis* spp. n. (p. 55); *T. grandis* sp. n.

(p. 56); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Thalmannammina* gen. n. (p. 469) (genotype *Haplophragmium subturnatum* Gryzbowski 1897), Upper Cretaceous and Lower Eocene, Carpathia, POKORNÝ Sbor. geol. Úst. Praha. **18** 1951 pp. 469-479 figs.

†*Tolypammmina complicata* sp. n. (p. 25); *T. fortis* sp. n. (p. 26); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Tremastegina* gen. n. (p. 256) (genotype *Amphistegina senni* Cushman 1945 in Vaughan 1945) [recorded as nom. nud. Zoo. Record for 1950, now validated], Palaeocene and Eocene, West Indies, BRÖNNIMANN Ecl. geol. helv. **43** 1950 [1951] pp. 255-265 figs.

†*Triplasia emslandensis* sp. n. (p. 273); *T. emslandensis emslandensis*, *T. e. acuta* subsp. n. (p. 274), Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*T. pseudoroemeri* sp. n. (p. 274) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.

†*Tritaxia subrotunda* sp. n. (p. 12) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.; †*T. glenrosensis* sp. n. (p. 592) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.

†*Trocholina infragranulata* sp. n. (p. 69) Cretaceous, Austria, NOTH Jahrb. geol. Bundesanst. Wien Sonderband **3** 1951 pp. 1-91 figs.

†*Tuberitina maljarkini* var. n. *grandis* (p. 88); *T. collosa* sp. n. (p. 89); *T. c. var. n. plana* (p. 89); *T. ? rotundata* sp. n. (p. 90); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Turritina meata* sp. n. (nom. nud.) (p. 450) Palaeogene, Poland, MASLAKOVA & MURATOV C.R. Acad. Sci. URSS N.S. **81** (3) 1951 pp. 449-452.

†*Turrispira* gen. n. (p. 18) *mira* sp. n. (p. 19) (genotype); *T. ? irregularis* sp. n. (p. 19); Carboniferous, Russia, REITLINGER Trav. Inst. Geol. Moscow ser. geol. **47** (126) 1950 pp. 1-126 figs.

†*Vaginulina duestensis* sp. n. (p. 292); *V. riedeli* sp. n. (p. 295); *V. riedeli* subsp. n. *riedeli* (p. 295); *V. riedeli* subsp. n. *paucicostata* (p. 295); *V. thoerenensis* sp. n. (p. 296); Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. **485** 1951 pp. 239-336 figs.; †*V. eichenbergi* sp. n. (p. 36); *mediocarinata* nom. n. (p. 36) [for *Vaginulina strigillata* Chapman 1894 (non Reuss)]; *V. tappani* nom. n. (p. 37) [for *Vaginulina biochei* var. *elongata* Eichenberg 1935 (non Roemer)], Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. **63** 1950 pp. 1-66 figs.; †*V. yoshihamaensis* sp. n. (p. 10) Miocene, Japan, INOUE & NAKASEKO J. Geol. Soc. Japan **57** (664) 1951 pp. 7-11 figs.; †*V. loeblichii* sp. n. (p. 26) Paleocene, New Jersey, McLEAN Contr. Cushman Fdn. **2** (1) 1951 pp. 20-29 figs.; †*V. otukai* sp. n. (p. 370), Miocene, Japan, UCHIO J. Geol. Soc. Japan **57** 1951 pp. 369-377 figs.; †*V. rugosa* sp. n. (p. 595) Lower Cretaceous, Texas, STEAD Texas J. Sci. **3** (4) 1951 pp. 577-605 figs.

†*Vaginulinopsis tuberculata* (Plummer) [for *Cristellaria subaculeata* var. *tuberculata* Plummer 1926], Paleocene, Atlantic Coastal Plain, U.S.A., McLEAN **633**.

Valvobifarina gen. n. (p. 39) (genotype *Bifarina mackinnoni* (Millet)), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

Valvopavonina gen. n. (p. 35) (genotype *Pavonina flabelliformis* (d. Orbigny)), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

Valvotextularia gen. n. (p. 30) (genotype *V. catenata* (Cushman), West Indies), HOFKER Siboga Exped. Monogr. **4a** 1951 pp. 1-513 figs.

†*Valvulineria menloensis* sp. n. (p. 446); *Valvulineria willapaensis* sp. n. (p. 447) Tertiary, Washington, RAU J. Paleont. **25** (4) 1951 pp. 417-

453 figs.; †*V. compressa* sp. n. (p. 9) Middle Eocene, Peru, STONE Contr. Cushman Fdn. 2 (1) 1951 p. 9 fig.; †*V. nonionoides* sp. n. (p. 504) Upper Cretaceous, California, BANDY J. Paleont. 25 (4) 1951 pp. 488–513 figs.; †*V. eocenica* sp. n. (p. 158) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. 25 (2) 1951 pp. 129–164 figs.; †*V. peruviana* var. n. *discrepans* (p. 157) Eocene, Ecuador, CUSHMAN & STAINFORTH J. Paleont. 25 (2) 1951 pp. 129–164 figs.

†*Verneuilinoides inaequalis* sp. n. (p. 276) Lower Cretaceous, Germany, BARTENSTEIN & BRAND Abh. senckenb. naturf. Ges. 485 1951 pp. 239–336 figs.

†*Webbinella rugosa* sp. n. (p. 5) Albian, Low Countries, DAM Mém. Soc. géol. Fr. Paléont. 63 1950 pp. 1–66 figs.

(d) Heliozoa

[No record].

(e) Radiolaria

New names and species of Radiolaria, CAMPBELL 174.

†Upper Silurian Radiolaria in Russia, BOROVIKOV 112.

†*Artoperina* gen. n. (p. 529) (genotype *Lithornithium loxia* Ehrenberg 1854) [nom. n. for *Artopera* Haeckel 1887, p. 1452 (non *Artopera* Haeckel 1887, p. 1450 et Haeckel 1881, p. 438)] Eocene, B.W.I., CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

Calosphaera gen. n. (p. 527) (genotype *Thalassosphaera belonium* Haeckel 1887) [nom. n. for *Thalassosphaera* Haeckel 1887, p. 30 (non *Thalassosphaera* Haeckel 1862, p. 260)] Pacific, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

†*Corythomelissa* subgen. n. (p. 529) (of *Lithomelissa*) (subgenotype *Lithomelissa corythium* Ehrenberg 1875 p. 78) [nom. n. for *Sethomelissa* Haeckel 1887, p. 1207 (non *Sethomelissa* Haeckel 1881, p. 431)] Eocene and Recent, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

Dimelissa subgen. n. (p. 529) (of *Lithomelissa*) (subgenotype *Lithomelissa thoracites* Haeckel 1862 p. 301)

[nom. n. for *Micromelissa* Haeckel 1887, p. 1205 (non *Micromelissa* Haeckel 1881, p. 433 et *Sethomelissa* Haeckel 1881, p. 431)] Mediterranean, Pacific and Indian Oceans, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

Eulophospyris gen. n. (p. 528) (genotype *Lophospyris diplodiscus* Haeckel 1887) [nom. n. for *Lophospyris* Haeckel 1887, p. 1080 (non *Lophospyris* Haeckel, 1881, p. 443 et 1887, p. 1066)] Pacific, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

†*Glycobotrys* gen. n. (p. 530) (genotype *Lithobotrys geminata* Ehrenberg 1875) [nom. n. for *Lithobotrys* Haeckel 1887, p. 1117 (non *Lithobotrys* Ehrenberg 1844, p. 74)] Eocene, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

Haliphormartidium gen. n. (p. 528) (genotype *Haliphormis lagena* Haeckel 1887) [nom. n. for *Haliphormis* Haeckel 1887, p. 1166 (non *Haliphormis* Ehrenberg, 1847, p. 54)] South Atlantic, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

Phormostichoartus subgen. n. (p. 530) (of *Cyrtophormis*) (subgenotype *Cyrtophormis (Acanthocyrtis) cylindrica* Haeckel 1887, p. 1461) [nom. n. for *Acanthocyrtis* Haeckel 1887, p. 1461 (non *Acanthocyrtis* Haeckel 1881, p. 437 et 1887, p. 1494)] Pacific, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

†*Phyletripes* gen. n. (p. 528) (genotype *Hexastylus primaevus* Rust 1885) Jurassic, Central Europe, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

Thalassorhaphis gen. n. (p. 527) (genotype *Thalassoplancta brevispicula* Haeckel 1887) [nom. n. for *Thalassoplancta* Haeckel 1887, p. 36 (non *Thalassoplancta* Haeckel, 1862 p. 261, et 1881, p. 470)] South Atlantic, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

†*Thecotapus* gen. n. (p. 528) (genotype *Thecosphaera unica* Rust 1885) Jurassic, Switzerland, CAMPBELL J. Paleont. 25 (4) 1951 pp. 527–530.

2.—MASTIGOPHORA

A. PHYTOMASTIGINA

(a) **Chrysomonadida**

(No record].

(b) **Cryptomonadida**

[No record].

(c) **Dinoflagellata**

†New Dinoflagellata from the Belgian Cretaceous, LEJEUNE-CARPENTIER 586.

Blastodinium apsteini sp. n. (p. 330), *B. chattoni* sp. n. (p. 332) parasitic in Copepods, Arabian Sea, SEWELL Sci. Rep. Murray Exped. 9 (4) 1951 pp. 255–394 figs.

†*Gymnodinium* (?) *avellana* sp. n. (p. B309) Cretaceous, Belgium, LEJEUNE-CARPENTIER Ann. Soc. géol. Belg. 74 (7–10) 1951 pp. B307–313 figs.

†*Phanerodinium cayeuxi* var. n. *laeve* (p. B310); *P. fourmarieri* sp. n. (p. B311); Cretaceous, Belgium, LEJEUNE-CARPENTIER Ann. Soc. géol. Belg. 74 (7–10) 1951 pp. B307–313 figs.

(d) **Euglenoidida**

Astasia Ehrenberg, 1830, has priority over *Astasia* Meyer, 1897 (bacteria) and *Astasia* Pribram, 1929 (bacteria), BECKER 79.

Gyropaigne lefevrei sp. n. (p. 454), France, BOURRELLY & GEORGES Bull. Mus. Hist. nat. Paris 23 (4) 1951 pp. 453–455 figs.

Klebsiella Pascher, 1931, preoccupied by *Klebsiella* Meunier, 1908 (Insecta) and preceded by *Klebsiella* Trevisan, 1885 (bacteria), BECKER 79.

Trachelomonas compacta sp. n. (p. 230); *T. guttata* sp. n. (p. 231) Low Countries, MIDDELHOEK, Hydrobiologia 3 (3) 1951 pp. 228–243 figs.

List of Trachelomonids from the Low Countries, MIDDELHOEK 674,

(e) **Phytomonadida**

Coccomonas Stein, 1878, has priority over *Coccomonas* Orla-Jensen, 1921 (bacteria), BECKER 79.

B. ZOOMASTIGINA

(f) **Protomonadida**

Castellanella Chalmers, 1918, has priority over *Castellanella* Pacheco & Rodrigues, 1930 (bacteria), BECKER 79.

Chilomastix bursa sp. n. (p. 272) from lizards, MOSKOWITZ J. Morph. 89 1951 pp. 257–321 figs.

Crithidia sandoni sp. n. (p. 591) from S. African bug *Holopterna alata*. GIBBS J. Parasit. 37 1951 pp. 587–595 figs.

Cryptobia salmositica sp. n. (p. 247), *C. lynchi* sp. n. (p. 248) from N. American fishes, KATZ J. Parasit. 37 1951 pp. 245–250 figs.

Leptomonas capsularis sp. n. (p. 133) from S. African bug *Cletus ochraceus*, GIBBS Parasitology 41 1951 pp. 128–133 figs.

Phytomonas Donovan 1909, has priority over *Phytomonas* Bergey et al., 1923 (bacteria), BECKER 79.

Trypanosoma spp. of bats: host-list and differential characters, RODHAIN 849.

Trypanosoma ariarii sp. n. (p. 673) from man, Colombia: its relation to *T. rangeli*, life-cycle and transmission, GROOT, RENJIFO & URIBE Amer. J. trop. Med. 31 1951 pp. 673–691 figs.; *T. brucei* var. n. *kabetei* (p. 23) for hybrid, *T. brucei* × *T. rhodesiense*, CULWICK, FAIRBAIRN & CULWICK Ann. trop. Med. Parasit. 45 1951 pp. 11–29; *T. gargantua* spp. (p. 293), *T. coelorhynchii* sp. n. (p. 297), *T. caulopssetae* sp. n. (p. 299), *T. tripterygium* sp. n. (p. 301), *T. congiopodi* sp. n. (p. 303), *T. paraperis* sp. n. (p. 305) from New Zealand marine fishes, LAIRD Proc. Zool. Soc. London 121 1951 pp. 285–309 figs.; *T. leleupi* sp. n. (p. 136) from African bat, *Hipposideros*

caffer, RODHAIN Ann. Parasitol. hum. comp. **26** 1951 pp. 133-137 figs.; *T. sheppardi* sp. n. (p. 102), *T. neitzi* sp. n. (p. 107) from terrapin *Pelusios sinuatus zuluensis* Portuguese E. Africa, DIAS Moçambique No. **68** 1951 pp. 97-113 figs.

Trypanosomes of *brucei* group regarded as varieties of *T. brucei*, CULWICK etc. **237**.

(g) Trichomonadida

Kirbyna pulchra sp. n. (p. 8) from N. African termite *Anacanthotermes ochraceus*, GRASSÉ & HOLLANDE Ann. Sci. nat. (11) **13** 1951 pp. 1-32 figs.

Polymastigoides gen. n. (p. 28) (nom. n. for *Devescovina elongata* Bernstein, 1928 : type species), GRASSÉ & HOLLANDE Ann. Sci. nat. (11) **13** 1951 pp. 1-32 figs.

Rhizonympha jahieri sp. n. (p. 13) from N. African termite *Anacanthotermes ochraceus*, GRASSÉ & HOLLANDE Ann. Sci. nat. (11) **13** 1951 pp. 1-32 figs.

Rhizonymphidae fam. n. (p. 24) to include *Rhizonympha*, GRASSÉ & HOLLANDE Ann. Sci. nat. (11) **13** 1951 pp. 1-32 figs.; Rhizonymphidae fam. nov. (p. 458) for *Rhizonympha* gen. n. (p. 459) *jahieri* sp. n. (genotype) from termite, GRASSÉ & HOLLANDE C.R. Acad. Sci., Paris **232** (6) 1951 pp. 458-460.

Trichomonas acosta sp. n. (p. 284), *T. dispar* sp. n. (p. 282), *T. aspectus* sp. n. (p. 298) from reptiles, MOSKOWITZ J. Morph. **89** 1951 pp. 257-321 figs.

Trichomonas spp. of amphibians and reptiles : comparative morphology and taxonomy, HONIGBERG **474**.

Trichomonas foetus, nomenclature, KIRBY **535**.

(h) Hypermastigida

[No record].

(i) Diplomonadida

Giardia : systematics, structure, key to spp., ANSARI **37**.

Giardia marginalis sp. n. (p. 488), *G. pseudoardeae* sp. n. (p. 489), *G. recurvirostrae* sp. n. (p. 489), ANSARI Ann. Parasitol. hum. comp. **26** 1951 pp. 477-490.

(j) Polymonadida

[No record]

3. SPOROZOA

A. COCCIDIOMORPHA

(a) Gregarinida

Capillicephalus gen. n. *lithobii* sp. n. (p. 415) from earwig *Lithobius piceus*, France, TUZET & ORMIÈRES Ann. Sci. nat. (11) **13** 1951 pp. 413-416 figs.

Carcinoecetes bermudensis sp. n. (p. 351), *C. mithraxi* sp. n. (p. 353), *C. calappae* sp. n. (p. 353) from marine Crustacea Bermuda, BALL Univ. California Publ. Zool. **47** (14) 1951 pp. 351-368 figs.

Cystocephalus algerianus var. n. (p. 405) *mauritanicus* from beetle *Pimelia angulata*, TUZET & THÉODORIDÈS Ann. Parasitol. hum. comp. **26** 1951 pp. 394-406 figs.

Gregarina larvarum sp. n. (p. 108) from larvae of *Blaps gibba*, Italy FILIPPONI Riv. Parassit. **12** 1951 pp. 85-111 figs.

Hirmocystis inaequalis sp. n. (p. 400) from beetle *Asida sericea*, TUZET & THÉODORIDÈS Ann. Parasitol. hum. comp. **26** 1951 pp. 394-406 figs.

Nematopsis panopei sp. n. (p. 353) from marine Crustacea Bermuda, BALL Univ. California Publ. Zool. **47** (14) 1951 pp. 351-368 figs.

Pyxinia : list of known spp. and their hosts ; *P. foliacea* sp. n. (p. 165) from beetle *Dermestes frischii*, France, TUZET & THÉODORIDÈS Arch. Zool. exp. gén. **87** 1951 (Notes and Rev.) pp. 162-168 figs.

Sphaerocystis tentyriae sp. n. (p. 396) from beetle *Tentyria mucronata*, TUZET & THÉODORIDÈS Ann. Parasitol. hum. comp. **26** 1951 pp. 394-406 figs.

Sphaerorhynchus hamoni sp. n. (p. 400), *S. chabaudi* sp. n. (p. 403) from beetles *Akis* spp., TUZET & THÉODORIDÈS Ann. Parasitol. hum. comp. **26** 1951 pp. 394-406 figs.

Stylocephalus variabilis sp. n. (p. 395), from Tenebrionid beetles, TUZET & THÉODORIDÈS Ann. Parasitol. hum. comp. **26** 1951 pp. 394-406 figs.

(b) Coccidiida

Eimeria : differential characters of spp. in turkeys; *E. adenoeides* sp. n. (p. 127) from turkey, U.S.A., MOORE & BROWN Cornell Vet. **41** 1951 pp. 124-135 figs.; *E. magnalabia* sp. n. (p. 17) from Canada goose *Branta canadensis interior*, LEVINE Proc. Amer. Soc. Protozool. **2** 1951 p. 17; *E. mccordocki* sp. n. (p. 154) from Mule Deer *Odocoileus hemionus* U.S.A. [No description given], LANDRAM Univ. Wyoming Publ. **16** (1-4) 1951 p. 154.

Haemogregarina salariasi sp. n. (p. 3) from blenny *Salarias fasciatus* Fiji, LAIRD Zool. Publ. Victoria Univ. Coll. **10** 1951 pp. 1-15 figs.

Isopora belli and *I. hominis* from man : independence of these spp. confirmed, MEIRA & CORRÊA **669**.

Pfeifferella Labbé, 1899, has priority over *Pfeifferella* Buchanan, 1918 (bacteria), BECKER **79**.

(c) Haemosporidia

Babesia Starcovici, 1893, is preceded by *Babesia* Trevisan, 1889 (bacteria) : suppression of the latter recommended, BECKER **79**.

Echinozoon gen. n. *hoogstraali* sp. n. (p. 529) from hyrax *Heterohyrax syriacus* A. E. Sudan, GARNHAM J. Parasit. **37** 1951 pp. 528-532 figs.

Hepaticystis correct name of *Hepaticystes* Levaditi & Schoen, 1932 which was mis-spelt, GARNHAM **374**.

Laverania Feletti & Grassi, 1889 to be valid generic name, with *L. falciparum* (Welch, 1897) as type species, for Malignant Tertian malaria parasite, ANON, **5**,

Leucocytozoon andrewsi sp. n. (p. 487) from domestic fowl, U.S.A., ATCHLEY J. Parasit. **37** 1951 pp. 483-488; *L. peñolopesi* sp. n. (p. 73) from E. African bird, *Pternistes afer swynnertonii*, DIAS Moçambique No. **67** 1951 pp. 71-92 figs.

Piroplasma annulatum to be attributed to Dschunkowsky & Luhs, 1905, ANON. **3**.

Plasmodium huffi sp. n. from toucan, *Ramphastos toco* Brazil, MUNIZ, SOARES & BATISTA Rev. Brasil. Malariol. **3** 1951 pp. 339-362 figs.; *P. lygosomae* sp. n. (p. 184) from New Zealand skink, *Lygosoma moco*, LAIRD J. Parasit. **37** 1951 pp. 183-189 figs.; *P. roussetti* sp. n. (p. 273) from African fruit-bat *Roussetus leachi*, RIEL, HIERNAX-L'HOËST & HIERNAX-L'HOËST Parasitology **41** 1951 pp. 270-273 figs.; *P. simium* sp. n. (p. 550) from Howler Monkey, *Alouatta fusca*, Brazil, FONSECA Mem. Inst. O. Cruz. **49** 1951 pp. 543-553 figs.; *P. falciparum* : pre-erythrocytic stages of development in human liver, SHORTT etc. **931**; *P. Marchiafava* & Celli, 1885 with type species *P. malariae* (Feletti & Grassi, 1889) (the Quartan Malaria parasite), ANON. **5**.

B. CNIDOSPORIDIA

(d) Myxosporidia

[No record]

(e) Microsporidia

Nosema bischoffi sp. n. (p. 80) parasitic in ovine tapeworm *Moniezia bischoffi*, WEISER Acta Soc. zool. Bohemosloven. **15** 1951 pp. 79-84 figs.; *N. otiorhynchi* sp. n. (p. 216) from Malpighian tubes of beetle *Otiorynchus ligustici*, Czechoslovakia, WEISER Acta Soc. zool. Bohemosloven. **15** (2) 1951 pp. 209-218 figs.

(f) Actinomyxidia

[No record]

(g) Sarcosporidia

[No record]

(h) **Haplosporidia**

Polycarium ozakii sp. n. (p. 148) from Japanese Phyllopod *Branchinella kugenumaensis*, KANAI & WATANABE J. Sci. Hiroshima Univ. (Zool.) **12** 1951 pp. 147-151 figs.

4. CILIOPHORA

A. OPALINATA

[No record]

B. CILIATA

Systematics of the Ciliata, FAURÉ-FREMIET **326**.

(a) **Holotrichida**

Sand-dwelling ciliates of Cape Cod, FAURÉ-FREMIET **330**; *Anoplophrya attenuata* sp. n. (p. 1772), France, PUYTORAC C.R. Acad. Sci. Paris **232** (19) 1951 pp. 1772-1774 figs.

Centrophorella lanceolata sp. n. (p. 65), fine sand, Barnstable Harbour, Cape Cod, FAURÉ-FREMIET Biol. Bull. **100** 1951 pp. 59-70 figs.

Charon Jameson, 1925, is preoccupied by *Charon* Karsch, 1879 (Arachnida), and should therefore be suppressed, BECKER **79**.

Colpidium - *Glaucoma* - *Leucophrys* - *Tetrahymena* group: principles of classification of strains, CORLISS **223**.

Cryptocaryon gen. n. *irritans* sp. n. (p. 1) from marine fishes, BROWN Agenda and Abstr. Sci. Meet. Zool. Soc. London No. 11 1950 [1951] pp. 1-3.

Cryptochilidium caudatum sp. n. (p. 373) from gut of sea urchin, *Strongylocentrotus nudus*, POLJANSKIJ Mag. Parasit. (Moscow) **13** 1951 pp. 371-393 figs.

Entorhipidium triangularis sp. n. (p. 377) from gut of sea urchins *Strongylocentrotus* spp., POLJANSKIJ Mag. Parasit. (Moscow) **13** 1951 pp. 371-393 figs.

Geleia simplex sp. n. (p. 69), fine sand, Cape Cod, FAURÉ-FREMIET Biol. Bull. **100** 1951 pp. 59-70 figs.

Plagiopyliella gen. n. *pacifica* sp. n. (p. 383) from gut of sea urchins, *Strongylocentrotus* spp., POLJANSKIJ Mag. Parasit. (Moscow) **13** 1951 pp. 371-393 figs.

Remanella obtusa sp. n. (p. 68), coarse sand, Cape Cod, FAURÉ-FREMIET Biol. Bull. **100** 1951 pp. 59-70 figs.

Sphenophrya minor sp. n. (p. 359) from gills of *Cardium* sp., Vladivostok, POLJANSKIJ Mag. Parasit. (Moscow) **13** 1951 pp. 355-370 figs.

(b) **Heterotrichida**

Ampullofolliculina gen. n. (p. 143) *logeniformis* sp. n. (p. 143) [for *Folliculina* (*Vorticella*) *ampulla* Andrews 1949], HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. **4** 1951 pp. 1-391 figs.

Ascobius claparèdei sp. n. (p. 117) [for *Freia ampulla* Claparède et Lachmann 1858]; *A. fauré-fremiети* sp. n. (p. 118) [for *Folliculina ampulla* Fauré-Fremiet 1932 (non Claparède et Lachmann 1858)]; *A. siléni* sp. n. (p. 121) [for *Folliculina simplex* Silén 1947 (non Dons)], HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. **4** 1951 pp. 1-391 figs.

Atriofolliculina gen. n. (p. 124) [for *Parafolliculina* Andrews 1946 (*partim*) and Fauré-Fremiet 1936 (*partim*)]; *A. andrewsi* sp. n. (p. 124) [for *Parafolliculina amphora* Andrews 1946 (non Andrews 1941)]; *A. fauréana* sp. n. (p. 129) [for *Parafolliculina hirundo* Fauré-Fremiet 1936 (non Kent 1882)], HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. **4** 1951 pp. 1-391 figs.

Aulofolliculina gen. n. (p. 227) *labyrinthica* sp. n. (p. 228) on bryozoa, Adriatic, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. **4** 1951 pp. 1-391 figs.

Balantidium galianoi sp. n. (p. 148) from newt *Molge waltii*, Spain, FERNANDEZ-GALIANO Trab. Inst. Cienc. nat. Acosta (Biol.) **3** (3) 1951 pp. 111-158 figs.

Claustrofolliculina gen. n. (p. 147) *clausa* sp. n. (p. 147) from *Cellaria salicornia*, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. **4** 1951 pp. 1-391 figs.

Diapyloriculina gen. n. (p. 158) *thomsoni* sp. n. (p. 159) [for *Folliculina boltoni* Thomsen 1924 (non Kent)]; *D. rotunda* sp. n. (p. 161) from bryozoans, Adriatic; *D. similis* sp. n. (p. 165) from *Syncoryne* and *Cladonema*, Adriatic; HADZI Dela Slov. Akad. Zuan. Umst. nat. Med. 4 1951 pp. 1-391 figs.

Donsia gen. n. (p. 132) [for *Semifolliculina* Dons 1917 (*partim*)] (*Semifolliculina*) *mirabilis* Dons 1917, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Epifolliculina gen. n. (p. 222) *diaphana* sp. n. (p. 223) on *Retepora beaneana*, Adriatic, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Eufolliculina gen. n. (p. 16) [for *Folliculina* Laackmann 1910 (*partim*)] *ampullacea* sp. n. (p. 16) [for *Folliculina ampulla* Laackmann 1910] from Adriatic, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Systematics of Folliculinids, HADZI 428.

Halofolliculina gen. n. (p. 150) (*Freia*) *elegans* Claparède et Lachmann 1859, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Lagotia fauré-fremiati sp. n. (p. 47) [for *Folliculina aculeata* Fauré-Fremiet 1936 (non Claparède et Lachmann 1858)]; *L. coerulea* sp. n. (p. 87) [for *Folliculina elegans* Fauré-Fremiet 1936 (non Claparède et Lachmann 1858)]; *L. donsi* sp. n. (p. 89) on bryozoan, Adriatic; *L. minima* sp. n. (p. 94) on bryozoan, Adriatic, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Latifolliculina gen. n. (p. 130) [for *Parafolliculina* Fauré-Fremiet 1936 (*partim*)] *L. incolorea* sp. n. (p. 131) [for *Parafolliculina amphora* Fauré-Fremiet 1936 (non Dons)] HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Licnophora aeolis sp. n. (p. 361) from gills of *Aeolis* sp., Ussuri Bay, Sea of Japan, POLJANSKIJ Mag. Parasit. (Moscow) 13 1951 pp. 355-370 figs.

Nyctotherus cacopusi sp. n. (p. 210) from Indian frog *Cacopus systema*, UTTANGI Current Sci. 20 (8) 1951 pp. 210-211 figs.; *Nyctotherus*: differential diagnosis of the "giant" spp., UTTANGI 1037.

Pachyfolliculina gen. n. (p. 33) [for *Folliculina* Dons 1927 (*partim*)] (*Folliculina*) *gunneri* Dons 1927, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Parafolliculina americana sp. n. (p. 183) [for *Parafolliculina amphora* Andrews 1941]; *P. glutinata* sp. n. (p. 179) from lamellae of *Posidonia*, Adriatic; HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Pedifolliculina gen. n. (p. 105) [for *Pseudofolliculina* Dons 1915 (*partim*)] (*Pseudofolliculina*) *arctica* Dons 1915 HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Perifolliculina gen. n. (p. 153) (*Parafolliculina*) *röstensis* Dons 1931, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Planifolliculina gen. n. (p. 208) *cumbens* sp. n. (p. 208) from various habitats, Adriatic, HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

Splifolliculina gen. n. (p. 214) *adherens* sp. n. (p. 215) on *Retepora beaneana*, Adriatic; *S. longicollis* sp. n. (p. 218) on *Anomia ephippium* etc., Adriatic; HADZI Dela Slov. Akad. Zuan. Umst. Hist. nat. Med. 4 1951 pp. 1-391 figs.

(c) Oligotrichida

†Mesozoic Tintinnids from Italy, COLOM 219.

†*Calpionella* in Australian Upper Jurassic, BRUNNSCHWEILER 161.

(d) **Entodiniomorpha**

Diplodinium (*Diplodinium*) *psittaceum* f. n. *psittaceum* (p. 114), *D. (D.) p. f. n. longi-caudatum* (p. 115) from zebu cattle, E. Africa, MORIGGI Riv. Biol. Colon. **10** 1950 pp. 103-134 figs.; *D. dentatum* (Schuberg, 1888): gen. and sp. placed on official lists of generic and specific names in zoology, ANON. **2**.

(e) **Hypotrichida**

[No record]

(f) **Peritrichida**

Polycycla gen. n. *discophora* sp. n. (p. 364) from gut of *Cucumaria obunca* Ussuri Bay, Sea of Japan, POLJANSKIJ Mag. Parasit. (Moscow) **13** 1951 pp. 355-370 figs.

Polycyclidae fam. n. (p. 364) to include *Polycycla* (q. v.), POLJANSKIJ Mag. Parasit. (Moscow) **13** 1951 pp. 355-370 figs.

Telotrochidium johanninae sp. n. (p. 149) stream, Paris suburbs, FAURÉ-FREMIET Bull. Soc. zool. Fr. **75** 1950 pp. 148-150 fig.

C. SUCTORIA

Acineta bocqueti sp. n. (p. 27), *A. tisbei* sp. n. (p. 28), ectoparasitic on Copepods, GUILCHER Arch. Zool. exp. gén. **87** 1950 (Notes et Rev. No. 1 pp. 24-30 figs.); *A. euchaetae* sp. n. (p. 278) ectoparasitic on Copepods, Arabian Sea, SEWELL Sci. Rep. Murray Exped. **9** (4) 1951 pp. 255-394 figs.

Hallezia scottocalani sp. n. (p. 284) ectoparasitic on Copepod, Arabian Sea, SEWELL Sci. Rep. Murray Exped. **9** (4) 1951 pp. 255-394 figs.

Ophryodendron faurei sp. n. (p. 25) ectoparasitic on Copepod, GUILCHER Arch. Zool. exp. gén. **87** 1950 (Notes et Rev. No. 1 pp. 24-30 figs.)

Paracineta gaetani sp. n. (p. 281) ectoparasitic on Copepods, Arabian Sea, SEWELL Sci. Rep. Murray Exped. **9** (4) 1951 pp. 255-394 figs.

Trichophrya danae sp. n. (p. 14) from Greenland waters, GRØNTVED Medd. Grønland **143** (8) 1951 pp. 13-21 figs.

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Diplomorpha gen. n. (p. 451) *paradoxa* sp. n. (p. 451) in ectoderm of Siphonophora, ROSE & CALHON C.R. Acad. Sci., Paris **233** (5) 1951 pp. 451-452 figs.

